

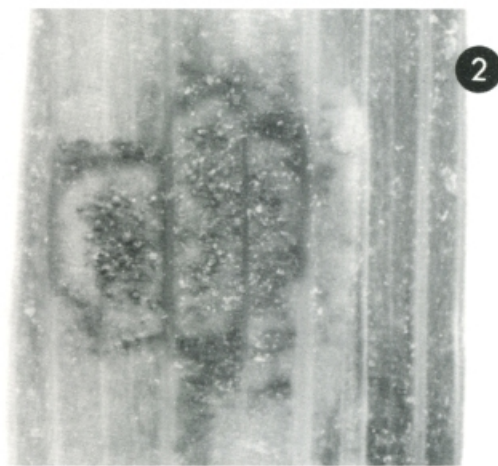
**CERCOSPORA LEAF SPOT OF NEW ZEALAND FLAX**

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**INTRODUCTION:** New Zealand flax (Phormium tenax J. R. Forst. & G. Forst.), also known as New Zealand hemp (3), belongs to the lily family (Liliaceae) and is endemic to New Zealand and Norfolk Island (2). It is commonly planted as an ornamental in warm climates and is sometimes grown in greenhouses. The fibers of P. tenax are of high quality and are among the strongest natural fibers known to man (2). The high labor cost of harvesting and extracting the fibers from tissues prevents this plant from becoming a commercial crop to supply material for rope and twine (2).



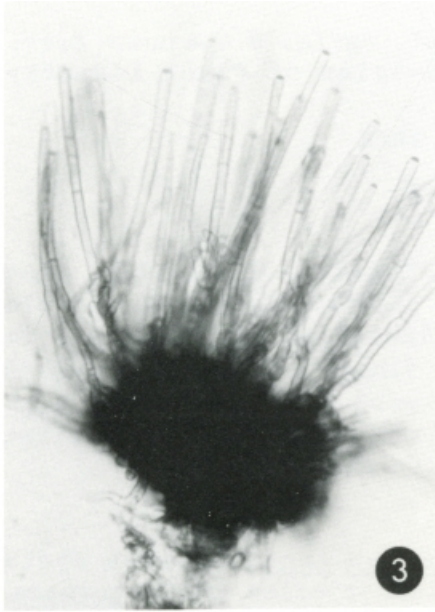
**Fig. 1.** Leaves of Phormium tenax showing spots caused by an undetermined species of Cercospora. X 1.0. (DPI File #89005-A, Jeffrey W. Lotz).



**Fig. 2.** Leaf spots showing stomata of Cercospora bearing conidiophores and conidia. X 15.0. (DPI File #89005-B, Jeffrey W. Lotz).

A New Zealand flax sample with a leaf spot disease (Figs. 1-2) caused by an unidentified fungus species of the genus Cercospora (Figs. 3-4) was submitted to our plant disease clinic in 1988. In 1960, Mr. Bolick, a former employee of this Bureau, reported a new species of Cercospora (Cercospora phormii) on New Zealand flax. Dr. C. Chupp at Cornell University confirmed the identification for him at that time, and a voucher specimen (Cornell Herb. #1412) was deposited. Our review of the literature (1,4,5) revealed no such species was ever described making the new species C. phormii, a nomen nudum and thus invalid.

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**Fig. 3.** Conidiophores of Cercospora arising from the stroma. Conidial scars on the conidiophores show a distinct thickening. X 289. (DPI File #89037-A).



**Fig. 4.** Conidium of Cercospora showing a thickened scar. X 578. (DPI File #89037-B).

**SYMPTOMS:** Initially, spots are yellow and irregular, often elongated, up to 8 mm long x 3 mm wide, then turn brown, necrotic, with reddish darker borders; some with a chlorotic diffuse halo.

**CONTROL:** Current chemical control recommendations can be obtained from the local county Cooperative Extension Service.

**SURVEY AND DETECTION:** Look for yellow and irregular, often elongated leaf spots, turning necrotic brown with reddish, darker borders.

#### **LITERATURE CITED**

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